### IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A compound represented by the following formula (1): [Chemical formula 1]

$$\begin{array}{c}
R^4 \\
R^2 & R^1 \\
X & (1) \\
R^3 & \end{array}$$

(wherein, wherein,

R<sup>1</sup> and R<sup>3</sup> each independently represents an aromatic hydrocarbon group which may have a substituent or an aromatic heterocyclic group which may have a substituent,

R<sup>2</sup> represents a saturated or unsaturated monocyclic heterocyclic group or unsaturated polycyclic heterocyclic group which may have a substituent,

R<sup>4</sup> represents a hydrogen atom or a C<sub>1-6</sub> alkyl group,

X represents -S-, -SO- or  $-SO_2-$ ,

an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 2 (Currently Amended): A compound according to Claim 1, wherein R<sup>1</sup> and R<sup>3</sup> each independently represents a phenyl group which may have a substituent; an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 3 (Original): A compound according to Claim 1, wherein  $R^1$  and  $R^3$  each independently represents an aromatic hydrocarbon group or aromatic heterocyclic group which may have 1 to 3 substituents selected from halogen atoms,  $C_{1-6}$  alkyl groups, trihalogenomethyl groups,  $C_{1-6}$  alkoxy groups, formyl group,  $C_{2-6}$  alkanoyl groups, carboxyl group, carboxyamino  $C_{1-6}$  alkyl groups,  $C_{1-6}$  alkoxycarbonylamino  $C_{1-6}$  alkyl groups, oxo group, nitro group, cyano

group, amidino group,  $C_{2-6}$  alkenyloxy groups, hydroxy group, thioxo group, amino group,  $C_{1-6}$  alkylamino groups, di( $C_{1-6}$  alkyl)amino groups,  $C_{1-6}$  alkoxycarbonyl groups, carbamoyl group,  $C_{1-6}$  alkylcarbamoyl groups, di( $C_{1-6}$  alkyl)carbamoyl groups, thiocarbamoyl group,  $C_{1-6}$  alkylthiocarbamoyl groups, di( $C_{1-6}$  alkyl)thiocarbamoyl groups, mercapto group,  $C_{1-6}$  alkylthio groups,  $C_{1-6}$  alkylsulfinyl groups and  $C_{1-6}$  alkylsulfonyl groups; an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 4 (Currently Amended): A compound according to Claim 1, wherein R<sup>1</sup> and R<sup>3</sup> each independently represents a phenyl group which may have 1 to 3 substituents selected from halogen atoms, C<sub>1-6</sub> alkyl groups, trihalogenomethyl groups, C<sub>1-6</sub> alkoxy groups, formyl group, C<sub>2-6</sub> alkanoyl groups, carboxyl group, carboxyamino C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkyl groups, oxo group, nitro group, cyano group, amidino group, C<sub>2-6</sub> alkenyloxy groups, hydroxy group, thioxo group, amino group, C<sub>1-6</sub> alkylamino groups, di(C<sub>1-6</sub> alkyl)amino groups, C<sub>1-6</sub> alkoxycarbonyl groups, carbamoyl group, C<sub>1-6</sub> alkylcarbamoyl groups, di(C<sub>1-6</sub> alkyl)carbamoyl groups, thiocarbamoyl group, C<sub>1-6</sub> alkylthiocarbamoyl groups, di(C<sub>1-6</sub> alkyl)thiocarbamoyl groups, mercapto group, C<sub>1-6</sub> alkylthio groups, C<sub>1-6</sub> alkylsulfinyl groups and C<sub>1-6</sub> alkylsulfonyl groups; an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 5 (Currently Amended): A compound according to any one of Claims 1 to 4

Claim 1, wherein R<sup>2</sup> represents a pyridyl group which may have a substituent; an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 6 (Canceled):

Claim 7 (Original): A compound according to Claim 5, wherein R<sup>2</sup> represents a pyridyl group which may be substituted with 1 to 3 substituents selected from halogen atoms, cyano group, C<sub>1-6</sub> alkyl groups, hydroxy group, C<sub>1-6</sub> alkoxy groups, C<sub>2-6</sub> alkenyloxy groups, carboxy C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxycarbonyl C<sub>1-6</sub> alkyl groups, heterocycle-carbonyl C<sub>1-6</sub> alkyl groups, hydroxy C<sub>1-6</sub> alkyl groups, C<sub>6-10</sub> aromatic hydrocarbon-sulfonyl C<sub>1-6</sub> alkyl groups, N,N-di(C<sub>1-6</sub> alkyl)aminosulfonyl C<sub>1-6</sub> alkyl groups, heterocycle-C<sub>1-6</sub> alkyl groups, C<sub>6-10</sub> aromatic hydrocarbon-C<sub>1-6</sub> alkyl groups, C<sub>6-10</sub> aromatic hydrocarbon-thio C<sub>1-6</sub> alkyl groups, azido-C<sub>1-6</sub> alkyl groups, amino C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkyl groups, di(C<sub>1-6</sub> alkyl)amino C<sub>1-8</sub> 6 alkyl groups, hydroxy C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkyl groups, bis(C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl groups, (hydroxy C<sub>1-6</sub> alkyl)(C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl groups, C<sub>2-6</sub> alkanoylamino C<sub>1-6</sub> alkyl groups, di(C<sub>2-6</sub> alkanoyl)amino C<sub>1-6</sub> alkyl groups, carboxyamino C<sub>1-6</sub> alkyl groups, di(C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkyl groups, di(C<sub>1-6</sub> alkoxycarbonyl)amino C<sub>1-6</sub> alkyl groups, carbamoylamino C<sub>1-6</sub> alkyl groups, N-C<sub>1-6</sub> alkylcarbamoylamino C<sub>1-6</sub> alkyl groups, N,N-di(C<sub>1-6</sub> alkyl)carbamoylamino C<sub>1-6</sub> alkyl groups, aminosulfonylamino C<sub>1-6</sub> alkyl groups, N- $C_{1-6}$  alkylsulfonylamino  $C_{1-6}$  alkyl groups, di( $C_{1-6}$  alkyl)aminosulfonylamino  $C_{1-6}$  alkyl groups,  $C_{6-10}$  aromatic hydrocarbon-sulfonylamino- $C_{2-6}$  alkanoylamino  $C_{1-6}$  alkyl groups, amino  $C_{1-6}$ alkylcarbonylamino C<sub>1-6</sub> alkyl groups, N-C<sub>1-6</sub> alkylamino C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl groups, N,N-di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl groups, heterocycle-C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl groups, heterocycle-C<sub>2-6</sub> alkenylcarbonylamino C<sub>1-6</sub> alkyl groups,  $C_{6-10}$  aromatic hydrocarbon- $C_{2-6}$  alkenylcarbonylamino  $C_{1-6}$  alkyl groups,  $C_{6-10}$  aromatic hydrocarbon-carbonylamino C<sub>1-6</sub> alkyl groups, C<sub>6-10</sub> aromatic hydrocarbon-thiocarbonylamino  $C_{1-6}$  alkyl groups, heterocycle-carbonylamino  $C_{1-6}$  alkyl groups,  $C_{1-6}$  alkoxyoxalylamino  $C_{1-6}$ alkyl groups, (C<sub>6-10</sub> aromatic hydrocarbon-sulfonyl)(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub>

alkylsulfonylamino  $C_{1-6}$  alkyl groups,  $C_{1-6}$  alkylsulfonylamino  $C_{1-6}$  alkyl groups, carbamoyloxy C<sub>1-6</sub> alkyl groups, N-C<sub>1-6</sub> alkylcarbamoyloxy C<sub>1-6</sub> alkyl groups, N,N-di(C<sub>1-6</sub> alkyl)carbamoyloxy C<sub>1-6</sub> alkyl groups, C<sub>6-10</sub> aromatic hydrocarbon-C<sub>1-6</sub> alkylcarbamoyloxy C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxycarbonyloxy- $C_{1-6}$  alkyl groups,  $C_{6-10}$  aromatic hydrocarbon-oxycarbonyloxy  $C_{1-6}$  alkyl groups, heterocycle carbonylhydrazonomethyl groups,  $C_{6-10}$  aromatic hydrocarbon carbonylhydrazonomethyl groups, C<sub>2-6</sub> alkenyl groups, carboxy-C<sub>2-5</sub> alkenyl groups, C<sub>1-6</sub> alkoxycarbonyl- $C_{2-6}$  alkenyl groups, carbamoyl  $C_{2-6}$  alkenyl groups, heterocycle- $C_{2-6}$  alkenyl groups, formyl group, carboxyl group, heterocycle-carbonyl groups,  $C_{6-10}$  aromatic hydrocarboncarbonyl groups, C<sub>1-6</sub> alkoxycarbonyl groups, carbamoyl group, N-C<sub>1-6</sub> alkylcarbamoyl groups, N,N-di( $C_{1-6}$  alkyl)carbamoyl groups,  $C_{3-8}$  cycloalkyl- $C_{1-6}$  alkylcarbamoyl groups,  $C_{1-6}$  alkylthio  $C_{1-6}$  alkylcarbamoyl groups,  $C_{1-6}$  alkylsulfinyl  $C_{1-6}$  alkylcarbamoyl groups,  $C_{1-6}$  alkylsulfonyl  $C_{1-6}$ 6 alkylcarbamoyl groups, hydroxyaminocarbonyl group, C<sub>1-6</sub> alkoxycarbamoyl groups, hydroxy  $C_{1-6}$  alkylcarbamoyl groups,  $C_{1-6}$  alkoxy  $C_{1-6}$  alkylcarbamoyl groups, amino  $C_{1-6}$  alkylcarbamoyl groups, amino  $C_{1-6}$  alkylthiocarbamoyl groups, hydroxy  $C_{1-6}$  alkylcarbamoyl groups,  $C_{1-6}$ alkoxycarbonyl C<sub>1-6</sub> alkylcarbamoyl groups, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkylcarbamoyl groups,  $C_{1-6}$  alkoxycarbonylamino  $C_{1-6}$  alkylthiocarbamoyl groups, heterocycle-carbamoyl groups, heterocycle- $C_{1-6}$  alkylcarbamoyl groups,  $C_{6-10}$  aromatic hydrocarbon-carbamoyl groups, hydrazinocarbonyl groups, N-C<sub>1-6</sub> alkylhydrazinocarbonyl groups, N'-C<sub>1-6</sub> alkylhydrazinocarbonyl groups, N',N'-di(C<sub>1-6</sub> alkyl)hydrazinocarbonyl groups, N,N'-di(C<sub>1-6</sub> alkyl)hydrazinocarbonyl groups, N,N',N'-tri(C<sub>1-6</sub> alkyl)hydrazinocarbonyl groups, N'-(heterocycle-carbonyl)-hydrazinocarbonyl groups, amino group, C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkylamino groups, amino  $C_{1-6}$  alkylamino groups, ( $C_{1-6}$  alkylamino  $C_{1-6}$  alkylamino groups, ( $C_{1-6}$ alkylamino C<sub>1-6</sub> alkyl)(C<sub>1-6</sub> alkyl)amino groups, C<sub>1-6</sub> alkoxycarbonylamino C<sub>1-6</sub> alkylamino groups,  $di(C_{1-6} \text{ alkyl})$ amino  $C_{1-6} \text{ alkylamino groups}$ , heterocycle-amino  $C_{1-6} \text{ alkylamino groups}$ , carboxyl C<sub>1-6</sub> alkylamino groups, (carboxyl C<sub>1-6</sub> alkyl)(C<sub>1-6</sub> alkyl)amino groups, heterocycle-C<sub>1-6</sub> alkylamino groups, (heterocycle-C<sub>1-6</sub> alkyl)(C<sub>1-6</sub> alkyl)amino groups, hydroxy C<sub>1-6</sub> alkylamino

groups, (hydroxy  $C_{1-6}$  alkyl)( $C_{1-6}$  alkyl)amino groups,  $C_{1-6}$  alkylthio  $C_{1-6}$  alkylamino groups,  $C_{1-6}$ alkylaminocarbonyloxy  $C_{1-6}$  alkylamino groups,  $(C_{1-6}$  alkylaminocarbonyloxy  $C_{1-6}$  alkyl $)(C_{1-6}$ alkyl)amino groups,  $C_{1-6}$  alkylsulfinyl  $C_{1-6}$  alkylamino groups,  $C_{1-6}$  alkylsulfonyl  $C_{1-6}$ alkylamino groups, groups represented by the formula: -N(R<sup>12</sup>)SO<sub>2</sub>R<sup>11</sup> (wherein, R<sup>11</sup> represents a  $C_{1-6}$  alkyl group, heterocyclic group,  $C_{1-6}$  alkyl-heterocyclic group, heterocycle- $C_{1-6}$  alkyl group, hydroxy C<sub>1-6</sub> alkyl group, amino C<sub>1-6</sub> alkyl group, C<sub>1-6</sub> alkyl group, di(C<sub>1-6</sub> <sub>6</sub> alkyl)amino  $C_{1-6}$  alkyl group, carboxy  $C_{1-6}$  alkyl group, carbamoyl  $C_{1-6}$  alkyl group, trifluoromethyl group, difluoromethyl group, fluoromethyl group, amino group, C<sub>1-6</sub> alkylamino group or di( $C_{1-6}$  alkyl)amino group,  $R^{12}$  represents a hydrogen atom,  $C_{1-6}$  alkyl group, hydroxy group or amino group), hydroxy  $C_{1-6}$  alkoxy  $C_{1-6}$  alkylamino groups,  $C_{6-10}$  aromatic hydrocarbon- $C_{1-6}$  alkylamino groups, heterocycle-carbonylamino groups,  $C_{1-6}$ alkoxycarbonylamino groups, heterocycle-C<sub>1-6</sub> alkylcarbonylamino groups, C<sub>6-10</sub> aromatic hydrocarbon-carbonylamino groups, heterocycle-amino groups, hydroxyimino group, C<sub>1-6</sub> alkoxyimino groups, oxo group, hydroxyimino  $C_{1-6}$  alkyl groups,  $C_{1-6}$  alkoxycarbonyl  $C_{1-6}$ alkylamino groups, ( $C_{2-6}$  alkanoylamino  $C_{1-6}$  alkyl)amino groups,  $C_{6-10}$  aromatic hydrocarbon groups, and heterocyclic groups (in which, the C<sub>6-10</sub> aromatic hydrocarbon group or heterocyclic group may be substituted with 1 to 3 substituents selected from halogen atoms, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, C<sub>2-6</sub> alkenyl groups, formyl group, C<sub>2-6</sub> alkanoyl groups, carboxyl group, carboxyamino  $C_{1-6}$  alkyl groups,  $C_{1-6}$  alkoxycarbonylamino  $C_{1-6}$  alkyl groups, oxo group, nitro group, cyano group, amidino group, C<sub>2-6</sub> alkenyloxy groups, hydroxy group, thioxo group, amino group,  $C_{1-6}$  alkylamino groups, di( $C_{1-6}$  alkyl)amino groups, amino  $C_{1-6}$  alkyl groups,  $C_{1-6}$ alkoxycarbonyl groups, carbamoyl group,  $C_{1-6}$  alkylcarbamoyl groups, di( $C_{1-6}$  alkyl)carbamoyl groups, thiocarbamoyl group, C<sub>1-6</sub> alkylthiocarbamoyl groups, di(C<sub>1-6</sub> alkyl)thiocarbamoyl groups,  $C_{2-6}$  alkanoylamino groups,  $C_{2-6}$  alkanoyl( $C_{1-6}$  alkyl)amino groups, thio  $C_{2-6}$ alkanoylamino groups, thio C<sub>2-6</sub> alkanoyl(C<sub>1-6</sub> alkyl)amino groups, formylamino group, formyl( $C_{1-6}$  alkyl)amino groups, thioformylamino group, thioformyl( $C_{1-6}$  alkyl)amino groups,

 $C_{2-6}$  alkanoyloxy groups, formyloxy group, mercapto group,  $C_{1-6}$  alkylthio groups,  $C_{1-6}$  alkylsulfinyl groups,  $C_{1-6}$  alkylsulfonyl groups, aminosulfonyl group,  $C_{1-6}$  alkylaminosulfonyl groups, di( $C_{1-6}$  alkyl)aminosulfonyl groups,  $C_{1-6}$  alkylsulfonylamino groups, and  $C_{1-6}$  alkylsulfonyl( $C_{1-6}$  alkyl)amino groups; an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 8 (Currently Amended): A compound according to Claim 5, wherein R<sup>2</sup> represents a group represented by the following formula:

### [Chemical formula 2]

$$R^{13} \longrightarrow N \qquad \qquad R^{10}$$

$$R^{12} \longrightarrow R^{10}$$

### (wherein, wherein,

 $R^{10}$  represents a hydrogen atom,  $C_{1-6}$  alkyl group, hydroxy  $C_{1-6}$  alkyl group,  $C_{1-6}$  alkyl group,  $C_{1-6}$  alkyl group,  $C_{1-6}$  alkyl group,  $C_{1-6}$  alkyl group, carboxy  $C_{1-6}$  alkyl group, heterocycle- $C_{1-6}$  alkyl group, or a group represented by the formula:  $-SO_2-R^{11}$  (in which,  $R^{11}$  represents a  $C_{1-6}$  alkyl, heterocyclic,  $C_{1-6}$  alkyl-heterocyclic, heterocycle- $C_{1-6}$  alkyl, hydroxy  $C_{1-6}$  alkyl, amino  $C_{1-6}$  alkyl,  $C_{1-6}$  alkylamino  $C_{1-6}$  alkyl, di( $C_{1-6}$  alkyl)amino  $C_{1-6}$  alkyl, trifluoromethyl, difluoromethyl, fluoromethyl, amino,  $C_{1-6}$  alkylamino or di( $C_{1-6}$  alkyl)amino),

 $R^{12}$  represents a hydrogen atom,  $C_{1-6}$  alkyl group, hydroxy group, or amino group, or  $R^{11}$  and  $R^{12}$  may, taken together with a sulfur atom to which  $R^{11}$  is attached and a nitrogen atom to which  $R^{12}$  is attached, form a 5- or 6-membered aliphatic heterocycle, and

 $R^{13}$  represents a  $C_{1-6}$  alkyl group, halogen atom or cyano group group); an N-oxide or S oxide thereof; a salt thereof; or a solvate thereof.

Claim 9 (Currently Amended): A compound according to Claim 5, wherein R<sup>2</sup> represents a group represented by the following formula:

# [Chemical formula 3]

## (wherein, wherein,

 $R^{10}$  represents a group represented by the formula:  $-SO_2-R^{11}$  (in which,  $R^{11}$  represents a  $C_{1-6}$  alkyl, heterocyclic,  $C_{1-6}$  alkyl-heterocyclic, heterocycle- $C_{1-6}$  alkyl, hydroxy  $C_{1-6}$  alkyl, amino  $C_{1-6}$  alkyl,  $C_{1-6}$  alkylamino  $C_{1-6}$  alkyl, di( $C_{1-6}$  alkyl)amino  $C_{1-6}$  alkyl, carboxy  $C_{1-6}$  alkyl, carboxy  $C_{1-6}$  alkyl, trifluoromethyl, difluoromethyl, fluoromethyl, amino,  $C_{1-6}$  alkylamino or di( $C_{1-6}$  alkyl)amino),

 $R^{12}$  represents a hydrogen atom,  $C_{1-6}$  alkyl group, hydroxy group or amino group, or  $R^{11}$  and  $R^{12}$  may, taken together with a sulfur atom to which  $R^{11}$  is attached and a nitrogen atom to which  $R^{12}$  is attached, form a 5- or 6-membered aliphatic heterocycle, and

 $R^{13}$  represents a  $C_{1-6}$  alkyl group, halogen atom or cyano group group; an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 10 (Currently Amended): A compound according to Claim 5, wherein R<sup>2</sup> represents a compound represented by the formula:

# [Chemical formula 4]

$$R^{13}$$
 $(CH_2)$  n
 $OH$ 

(wherein, wherein,

 $R^{13}$  represents a  $C_{1-6}$  alkyl group, halogen atom or cyano group, and n stands for an integer of from 0 to  $\underline{6}$   $\underline{6}$ ; an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 11 (Currently Amended): A compound according to Claim 1, wherein R<sup>1</sup> represents a 2,5-difluorophenyl or 2-fluoro-5-cyanophenyl group, R<sup>3</sup> represents a 4-chlorophenyl, 4-fluorophenyl, 2,4-difluorophenyl, 3,4-difluorophenyl, 3-fluoro-4-chlorophenyl, 4-trifluoromethylphenyl, 5-chloro-2-thienyl, 5-chloro-2-pyridyl, 6-chloro-3-pyridyl, or 6-trifluoromethyl-3-pyridyl group; R<sup>2</sup> represents a group represented by the following formula: [Chemical formula 5]

$$R^{13} \longrightarrow N \qquad \qquad R^{10}$$

$$R^{12} \longrightarrow R^{10}$$

(wherein, wherein,

 $R^{10}$  represents a hydrogen atom,  $C_{1-6}$  alkyl group, hydroxy  $C_{1-6}$  alkyl group,  $C_{1-6}$  alkyl group,  $C_{1-6}$  alkyl group,  $C_{1-6}$  alkyl group,  $C_{1-6}$  alkyl group, carboxy  $C_{1-6}$  alkyl group, heterocycle- $C_{1-6}$  alkyl group, or a group represented by the formula:  $-SO_2-R^{11}$  (in which,  $R^{11}$  represents a  $C_{1-6}$  alkyl, heterocyclic,  $C_{1-6}$  alkyl-heterocyclic, heterocycle- $C_{1-6}$  alkyl, hydroxy  $C_{1-6}$  alkyl, amino  $C_{1-6}$  alkyl,  $C_{1-6}$  alkylamino  $C_{1-6}$  alkyl, di( $C_{1-6}$  alkyl)amino  $C_{1-6}$  alkyl, trifluoromethyl, difluoromethyl, fluoromethyl, amino,  $C_{1-6}$  alkylamino, or di( $C_{1-6}$  alkyl)amino),

 $R^{12}$  represents a hydrogen atom,  $C_{1-6}$  alkyl group, hydroxy group, or amino group, or  $R^{11}$  and  $R^{12}$  may, taken together with a sulfur atom to which  $R^{11}$  is attached and a nitrogen atom to which  $R^{12}$  is attached, form a 5- or 6-membered aliphatic heterocycle, and

 $R^{13}$  represents a  $C_{1-6}$  alkyl group, halogen atom or cyano group group); an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 12 (Currently Amended): A compound according to Claim 1, wherein R<sup>1</sup> represents a 2,5-difluorophenyl or 2-fluoro-5-cyanophenyl group, R<sup>3</sup> represents a 4-chlorophenyl, 4-fluorophenyl, 2,4-difluorophenyl, 3,4-difluorophenyl, 3-fluoro-4-chlorophenyl, 4-trifluoromethylphenyl, 5-chloro-2-thienyl, 5-chloro-2-pyridyl, 6-chloro-3-pyridyl or 6-trifluoromethyl-3-pyridyl group;

R<sup>2</sup> represents a group represented by the following formula:

# [Chemical formula 6]

$$R^{13} \longrightarrow N \qquad \qquad R^{10}$$

$$R^{12}$$

#### (wherein, wherein,

 $R^{10}$  represents a group represented by the formula:  $-SO_2-R^{11}$  (in which,  $R^{11}$  represents a  $C_{1-6}$  alkyl, heterocyclic,  $C_{1-6}$  alkyl-heterocyclic, heterocycle- $C_{1-6}$  alkyl, hydroxy  $C_{1-6}$  alkyl, amino  $C_{1-6}$  alkyl,  $C_{1-6}$  alkylamino  $C_{1-6}$  alkyl, di( $C_{1-6}$  alkyl)amino  $C_{1-6}$  alkyl, trifluoromethyl, difluoromethyl, fluoromethyl, amino,  $C_{1-6}$  alkylamino or di( $C_{1-6}$  alkyl)amino),

 $R^{12}$  represents a hydrogen atom,  $C_{1-6}$  alkyl group, hydroxy group or amino group, or  $R^{11}$  and  $R^{12}$  may, taken together with a sulfur atom to which  $R^{11}$  is attached and a nitrogen atom to which  $R^{12}$  is attached, form a 5- or 6-membered aliphatic heterocycle, and

 $R^{13}$  represents a  $C_{1-6}$  alkyl group, halogen atom or cyano group group); an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 13 (Currently Amended): A compound according to Claim 1, wherein R<sup>1</sup> represents a 2,5-difluorophenyl or 2-fluoro-5-cyanophenyl group, R<sup>3</sup> represents a 4-chlorophenyl, 4-fluorophenyl, 2,4-difluorophenyl, 3,4-difluorophenyl, 3-fluoro-4-chlorophenyl, 4-trifluoromethylphenyl, 5-chloro-2-thienyl, 5-chloro-2-pyridyl, 6-chloro-3-pyridyl, or 6-

trifluoromethyl-3-pyridyl group;

R<sup>2</sup> represents a group represented by the following formula:

[Chemical formula 7]

$$R^{13}$$
 $(CH_2)$  n
 $OH$ 

(wherein, wherein,

 $R^{13}$  represents a  $C_{1-6}$  alkyl group, halogen atom or cyano group and n stands for an integer of from 0 to  $\underline{6}$  6); an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 14 (Currently Amended): A medicament comprising, as an effective ingredient, a compound as claimed in any one of Claims 1 to 13 Claim 1, an N-oxide or S-oxide thereof; a salt thereof; or a solvate thereof.

Claim 15 (Original): A medicament according to Claim 14, which is used for prevention or treatment of a disease resulting from abnormal production or secretion of  $\beta$ -amyloid protein.

Claim 16 (Original): A medicament according to Claim 15, wherein the disease resulting from abnormal production or secretion of  $\beta$  amyloid protein is Alzheimer disease or Down syndrome.

Claim 17 (Currently Amended): A pharmaceutical composition comprising a compound as claimed in any one of Claims 1 to 13 Claim 1, an N-oxide or S oxide thereof, a salt thereof or a solvate thereof and a pharmaceutically acceptable carrier.

Claims 18-20 (Canceled):

Claim 21 (Currently Amended): A method of treating a disease resulting from abnormal production or secretion of  $\beta$ -amyloid protein, which comprises administering an effective amount of a compound as claimed in any one of Claims 1 to 13 Claim 1, an N-oxide or S-oxide thereof, a salt thereof, or a solvate thereof.

Claim 22 (Currently Amended): A treating method according to Claim 21, wherein the disease resulting from abnormal production or secretion of  $\beta$  amyloid protein is Alzheimer disease or Down syndrome.

Claim 23 (New): A compound according to Claim 1, comprising at least one selected from the group consisting of:

- 5-Chloro-2-[(2,5-difluorophenyl-4-pyridylmethyl)thio]pyridine,
- 5-Chloro-2-[(2,5-difluorophenyl-4-pyridylmethyl)sulfonyl]pyridine,
- 2-Chloro-5-[(3-chloropyridin-4-yl)(2,5-difluorophenyl)methylthio]pyridine,
- 2-Chloro-5-[(3-chloropyridin-4-yl)(2,5-difluorophenyl)methylsulfonyl]pyridine,
- 5-[(3-Chloropyridin-4-yl)(2,5-difluorophenyl)methylsulfonyl]-2-fluoropyridine,
- 3,6-Dichloro-2-[(6-chloropyridin-3-ylthio)(pyridin-4-yl)methyl]pyridine,
- 3,6-Dichloro-2-[(6-chloropyridin-3-ylsulfonyl)(pyridin-4-yl)methyl]pyridine,
- 3,6-dichloro-2-[(6-chloropyridin-3-ylsulfinyl)(pyridin-4-yl)methyl]pyridine,
- [5-Chloro-4-[(5-chloropyridin-2-ylsulfonyl)(2,5-difluorophenyl)methyl]pyridin-2-yl]amine,

N-[5-Chloro-4-[(5-chloropyridin-2-ylsulfonyl)(2,5-difluorophenyl)methyl]pyridin-2-yl]methanesulfonamide,

t-Butyl [5-chloro-4-[(6-chloropyridin-3-ylthio)(2,5-difluorophenyl)methyl]pyridin-2-yl]carbamate,

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[5-Chloro-4-[(6-chloropyridin-3-ylsulfonyl)(2,5-difluorophenyl)methyl]pyridin-2-yl]amine, and

[5-Chloro-4-[(2,5-difluorophenyl)(6-trifluoromethylpyridin-3-ylsulfonyl)methyl]pyridin-2-yl]amine.